

NAVIGATING A UAV WITH TELEMETRY THROUGH A SOCKETABSTRACT

5 Navigating a UAV, including receiving in a remote control device a user's selection  
of a GUI map pixel that represents a waypoint for UAV navigation, the pixel having a  
location on the GUI; mapping the pixel's location on the GUI to Earth coordinates of  
the waypoint; receiving downlink telemetry, including a starting position from a GPS  
receiver on the UAV, from the UAV through a socket on the remote control device;  
10 calculating a heading in dependence upon the starting position, the coordinates of the  
waypoint, and a navigation algorithm; identifying flight control instructions for flying  
the UAV on the heading; and transmitting uplink telemetry, including the flight  
control instructions, through the socket to the UAV. In some embodiments the UAV  
is piloted, under control of a navigation computer on the UAV, from the starting  
15 position to the waypoint in accordance with a navigation algorithm.